

THAT WHAT IS CLAIMED:

1. An isolated ATP-utilizing regulatory protein encoded by a transposon, said
protein containing a mutation that allows efficient and simple insertion of and reduced
5 target site specificity on a transposable element derived from said transposon.

2. The protein of claim 1 wherein said protein is TnsC.

3. The protein of claim 2 wherein said mutation is valine at amino acid number
10 225.

4. A transposon encoding an ATP-utilizing regulatory protein, the protein
containing a mutation that allows efficient and simple insertion of and reduced target site
specificity on said transposon.

15 5. The transposon of claim 4, wherein said transposon is Tn7 or a derivative
thereof.

6. The transposon of claim 5 wherein said mutation is valine at amino acid
number 225.

20 7. A composition containing an isolated ATP-utilizing regulatory protein
encoded by a transposon, said protein containing a mutation that allows efficient and

simple insertion of and reduced target site specificity on said transposon and a transposable element derived from said transposon.

8. The composition of claim 7 wherein said protein is TnsC.

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9. The composition of claim 8 wherein said mutation is valine at amino acid number 225.

10. A composition containing a transposon encoding an ATP-utilizing regulatory protein, the protein containing a mutation that allows efficient and simple insertion of and reduced target site specificity on said transposon.

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11. The composition of claim 10 wherein said transposon is Tn7 or a derivative thereof.

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12. The composition of claim 11 wherein said mutation is valine at amino acid number 225.

13. The composition according to claim 7 further containing a transposon or transposable element derived therefrom capable of being activated by said protein.

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14. The composition of claim 13 further comprising target DNA into which said transposon or derivative is capable of inserting.

15. The composition of claim 13 in which said transposon or derivative contains
5 at least one primer binding site that is native to said transposon or heterologous.

16. The composition of claim 15 further comprising primers that hybridize to said primer binding site on the transposon or derivative.

10 17. The composition of claim 13 in which said transposon or derivative contains a heterologous DNA sequence.

18. The composition according to claim 10 further comprising a target sequence into which said transposon is capable of insertion.

15 19. The composition according to claim 11 which said transposon contains at least one primer binding site that is native to said transposon or heterologous.

20 20. The composition of claim 19 further comprising primers that hybridize to the primer binding site on said transposon.

21. The composition according to claim 11 in which said transposon contains a heterologous DNA sequence.

22. A composition containing an isolated ATP-utilizing regulatory protein
5 encoded by a transposon, said protein containing a mutation that allows efficient and simple insertion of and reduced target site specificity on a transposable element derived from said transposon, further comprising a transposon or transposable derived therefrom capable of being activated by said protein.

10 23. The composition of claim 22 wherein said transposon is a Tn7 or a derivative thereof and said protein is TnsC.

24. The composition of claim 23 wherein said mutation is valine at amino acid number 225.

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25. A kit containing the composition according to claim 22.